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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,900	12/03/2003	Jonathan F. Hester	58770US002	4176
32692	7590	10/19/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			LONEY, DONALD J	
			ART UNIT	PAPER NUMBER
			1772	
DATE MAILED: 10/19/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,900

Applicant(s)

HESTER ET AL.

Examiner

Donald Loney

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 9-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 10 is/are allowed.
- 6) ☒ Claim(s) 1,3-5,11,12,15-20 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 13, 2006 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 depends from cancelled claim 6.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 3-5, 11, 12, 15, 16 and 18-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 11 of copending Application No. 10/438090 as presented in the last office action, mailed December 13, 2005. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are broader than the ones of serial No. 10/438090 in that they do not contain a porous membrane, but do contain the manifold in claim 11. The manifold can be considered permanently attached to the plates if it is never removed therefrom.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3-5, 15 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Wataya et al (5651889) as presented in the last office action, mailed December 13, 2005.

Wataya et al teaches at least two spaced flat membranes 102, with spacers there between (sections at the top and bottom of the figures that space the plates 102), wherein what can be considered a manifold 3 is attached thereto. This rejection is to specifically address the limitation of two flow channels 301, 302 which are in what can be considered the manifold. There is a space between the membrane elements as shown at 108. With regards to claims 3-5, the product, or apparatus, is not structurally distinguishable from the prior art due to the gas bubbles. With regards to claim 15, spacers are shown as the top or bottom of figure 1 in the sections between 101 and 102. With regards to claim 18, process limitation as at tension does not structurally distinguish the product from the prior art.

8. Claims 1, 3-5, 11, 12, 15, 16 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kopf (5868930) as presented in the last office action, mailed December 13, 2005.

Kopf discloses a membrane module (figures 1 and 2) comprising at least two flat sheet elements (14a,14b) wherein the elements have flow channels (any of 24, 26 or 80) and a manifold(s) (MP_1 , MP_2) attached to the elements that control flow through openings O or PT and I in figure 18. Elements PT or O and I can be considered the first and second flow channels per claim 1. The elements are spaced by sheet 12 per claims 2 and 15. The flow arrows shown in figure 18 is/are the means for gas bubbles to flow per claim 3. The second manifold per claim 11 is show at 1 in figure 18. Second manifold MP_2 is in fluid communication with the other manifold through the unit per claim

16. Two manifolds are disclosed at column 17, lines 11-15 per claim 19. Rods 84 in figure 5 can be considered the frame per claim 20 supporting the elements.

9. Claims 1, 3-5, 15, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by either JP 07016591 or JP 11-244672 cited by the applicant as presented in the last office action, mailed December 13, 2005.

JP 07016591 discloses a membrane comprising at least two flat elements 1 and a manifold connected thereto (paragraph [0017]) wherein the manifold contains first and second flow channels 42 and 51, which are attached to pumps 43 and 52. The elements contain interior flow channels due to the fact that a plastic netting 12 is disclosed as between flat sheets 11. The elements are spaced as show in figures 1 and 4 per claims 15 and 18. Two membranes are shown per claim 19 since there are at least four shown in figures 1 and 4. A frame is disclosed in paragraph [0017]. JP 11-244672 discloses a similar arrangement as JP 07016591 in that a mesh 11 is sandwiched between two flat plates 12 in order to form the elements. Two flow channels 56 and 57 or 58 are formed in the manifold. Refer to figures 3 and 7-10 along with the corresponding paragraphs thereto. The examiner has included English translations of these documents for the applicants' convenience.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 11, 12, 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wataya et al in view of Sirkar (4789468) as presented in the last office action, mailed December 13, 2005.

The primary reference teaches the invention substantially as recited except for the second manifold and/ or additional manifolds attached to the module. See the 35 U.S.C. 102 rejection above.

Sirkar teaches to attach a two manifolds 122, 124 to a membrane modules in order to have an inlet and outlet manifold for transfer across the membranes. Refer to figure 3 and 4 along with column 9 lines 3-22.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the primary references to include a second manifold and/or additional manifolds on the module, as taught by Sirkar, for the purpose of providing additional ports to the module (i.e. inlet and outlet ports). Two arrange two of the modules per claim 19 would be obvious since it would involve a mere duplication of parts. The frame, to hold the unit together, per claim 20 is show at 101 in Wataya et al.

Allowable Subject Matter

12. Claims 9 and 10 are allowed for the reasons indicated in the last office action.

13. Claims 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims as previously indicated in the last office action.

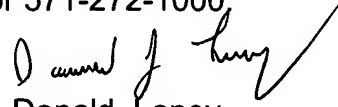
Response to Arguments

14. Applicant's arguments filed July 17, 2006 have been fully considered but they are not persuasive. In response to applicant's argument that the prior art fails to teach two flow channels in the manifold, one which delivers a first fluid to the interior portion of the membrane elements and the second for delivering a second fluid to the space between the elements, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. All of the prior art discloses two flow channels in the manifold as discussed above. Since there are spaces and/or holes in the membrane elements the flow channels are considered in fluid communication with both the membrane elements and the space there between. The applicant has deferred the provisional double patenting rejection until the case is in condition for allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Loney whose telephone number is (571) 272-1493. The examiner can normally be reached on Mon, Tues, Thurs and Fri. 8AM-4PM, flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Donald Loney
Primary Examiner
Art Unit 1772

DJL:D.Loney
10/16/06